

ABSTRACT

A polarized light color filter for producing R, G and B primaries from inputted white light in time division. The filter is small in size and strong 5 against mechanical vibration. The projections of the R, G and B lights can be arbitrarily varied in one period. The varying speed is high, and the ratio of utilization of the quantity of light from the light source is high. Elements 36(1), 38(1), 40(1), 38(2), 40(2), 38(3), 40(3), 38(4) and 36(2) are in order stacked and bonded between glass substrates (30, 32). The elements 38(1) 10 to 38(4) are polarized light converting elements for selecting either a mode in which the inputted light is outputted as it is by applied voltage control or a mode in which the inputted light is converted from one polarized light to the other and outputted. The elements 40(1) to 40(3) are narrow-band polarization spectroscopic elements reflecting only the S-polarized 15 components of the R, G and B lights and transmitting the other components. The elements 36(1), 36(2) are wide-band polarization spectroscopic elements transmitting the P-polarized components over the full visible range and reflecting the P-polarized components.

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